

September 19, 2018

VIA ELECTRONIC FILING

Mr. Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
Saint Paul, MN 55101-2147

Re: Late Filed – Proposed Special Conditions Related to Noise

**In the Matter of the Application of Freeborn Wind Energy LLC for a Large Wind Energy Conversion System Site Permit in Freeborn County
MPUC Docket No. IP-6946/WS-17-410; OAH Docket No. 80-2500-34633**

Dear Mr. Wolf:

Freeborn Wind Energy LLC (“Freeborn Wind”) has carefully reviewed the proposed permit conditions, particularly those related to noise found in Sections 7.4.1 and 7.4.2 of the Proposed Site Permit included with the Staff Briefing Papers in this docket, and offers the enclosed proposed alternative language addressing pre-construction noise modeling and post-construction noise monitoring special conditions. See **Attachment A**. Freeborn Wind plans to address this alternative language in its oral argument on September 20, 2018.

Freeborn Wind recognizes that this is a late filing under Minn. R. 7829.0420. There is good cause not to exclude the filing because it responds to new language in Staff Briefing Papers, reflects an offer of compromise, explains technical language that could otherwise be offered for the first time in oral argument, and is provided 24-hours before the Commission meeting, giving all parties an opportunity to review the language ahead of oral arguments.

Under the enclosed proposal, the site permit issued for Freeborn Wind would contain the language in Sections 4.3 (Noise) and 7.4 (Noise Studies) contained in the Draft Site Permit issued by the Commission on January 30, 2018. This language is consistent with other recent LWECS permits granted by the Commission. In addition, new language would be added as special conditions in Section 6.0 of the permit addressing specific guidance and requirements for pre-construction noise modeling (Proposed Section 6.1) and post-construction noise monitoring (Proposed Section 6.2) based on the facts and circumstances in this case.

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The language in the proposed special conditions requires Freeborn Wind to submit updated modeling and/or proposed mitigation demonstrating that modeled wind turbine-only noise will not exceed 47 dB(A) L₅₀-one hour at receptors. Specific guidance is included regarding the modeling assumptions to be used. Specifically, proposed Section 6.1 directs Freeborn Wind to follow the NARUC ISO 9613-2 standard with a 0.5 assumed ground factor. As reflected in the special condition language, setting a turbine-only noise limit at 47 dB(A), using the specified model assumptions, ensures that the Project will not cause or significantly contribute to an exceedance of the MPCA Noise Standards. This limit is supported in this record by expert testimony from Mr. Mike Hankard and the MPCA's 2015 Noise Guide, both stating that 3 dB(A) is the generally recognized minimum detectable change in environmental noise levels.¹ To illustrate, when nighttime background sound levels are at 50 dB(A) L₅₀-one hour, a maximum turbine-only contribution of 47 dB(A) L₅₀-one hour would result in a non-significant increase in total sound of less than 3 dB(A).

Similarly, the proposed language in Section 6.2 requires the Permittee to work with the Department of Commerce to develop a plan to minimize and mitigate turbine-only noise impacts if post-construction Noise Studies document an exceedance of the MPCA Noise Standards where turbine-only noise levels produce more than 47 dB(A) L₅₀-one hour at nearby receptors.

Freeborn Wind is offering this alternate language because the language contained in the Site Permit attached to Staff Briefing Papers creates ambiguity and would lead to significant compliance challenges. The proposed special condition language achieves a similar level of noise regulation, but in a manner that can actually be measured following the applicable rules and standards.² The language in these special conditions reflects the specific facts in this case and addresses ambiguities in the proposed language included in Staff Briefing Papers.

A copy of this filing is also being served upon the persons on the Official Service List of record. Freeborn Wind will be prepared to answer any questions the Commission may have regarding this filing at the September 20, 2018 agenda meeting.

¹ Evid. Hr'g Trans. Vol 1B (February 21, 2018) at 114-115 (Hankard); *see, also*, MPCA 2015 Noise Guide at 11.

² *See, e.g.*, Minn. R. 7030.0060, subp.4C ("Measurements must not be made in sustained winds or in precipitation which results in a difference of less than ten decibels between the background noise level and the noise source being measured.")

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Sincerely,

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Encl.

ATTACHMENT A
Proposed Special Condition Language

4.3 Noise (from Draft Site Permit)

The wind turbine towers shall be placed such that the Permittee shall, at all times, comply with noise standards established by the Minnesota Pollution Control Agency as of the date of this permit and at all appropriate locations. The noise standards are found in Minnesota Rules Chapter 7030. Turbine operation shall be modified or turbines shall be removed from service if necessary to comply with these noise standards. The Permittee or its contractor may install and operate turbines as close as the minimum setback required in this permit, but in all cases shall comply with Minnesota Pollution Control Agency noise standards. The Permittee shall be required to comply with this condition with respect to all homes or other receptors in place as of the time of construction, but not with respect to such receptors built after construction of the towers.

6.0 SPECIAL CONDITIONS

Special conditions shall take precedence over other conditions of this permit should there be a conflict.

6.1 Pre-Construction Noise Modeling (Proposed)

Freeborn Wind Energy LLC shall file a plan, including modeling and/or proposed mitigation, at least 60 days prior to the pre-construction meeting that demonstrates it will not cause or significantly contribute to an exceedance of the MPCA Noise Standards.

To ensure that the turbine-only noise does not cause or significantly contribute to an exceedance of the MPCA Noise Standards, modeled wind turbine-only sound levels (NARUC ISO 9613-2 with 0.5 ground) at receptors shall not exceed 47 dB(A) L₅₀-one hour. Given this, at no time will turbine-only noise levels exceed the MPCA Noise Standards, and when total sound does exceed the limits it will be primarily the result of wind or other non-turbine noise sources. Under these conditions, the contribution of the turbines will be less than 3 dB(A), which is the generally recognized minimum detectable change in environmental noise levels (non-laboratory setting). For example, when nighttime background sound levels are at 50 dB(A) L₅₀-one hour, a maximum turbine-only contribution of 47 dB(A) L₅₀-one hour would result in a non-significant increase in total sound of less than 3 dB(A).

6.2 Post-Construction Noise Monitoring (Proposed)

If the Noise Studies conducted under Section 7.4 document an exceedance of the MPCA Noise Standards where turbine-only noise levels produce more than 47 dB(A) L₅₀-one hour at nearby receptors, then the Permittee shall work with the Department of Commerce to develop a plan to minimize and mitigate turbine-only noise impacts.

7.4 Noise Studies (From Draft Site Permit)

The Permittee shall file a proposed methodology for the conduct of a post-construction noise study at least 14 days prior to the pre-construction meeting. The Permittee shall develop the postconstruction noise study methodology in consultation with the Department of Commerce. The study must incorporate the Department of Commerce Noise Study Protocol to determine the operating LWECs noise levels at different frequencies and at various distances from the turbines at various wind directions and speeds. The Permittee must conduct the post-construction noise study and file with the Commission the completed post-construction noise study within 18 months of commencing commercial operation.